



OWNER'S MANUAL

# **BLTZ**

## **SBV Series Variable Speed Hoist**

115V Models

**SBV0536 500lb**

**SBV1036 1000lb**



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SN \_\_\_\_\_ Date of Purchase \_\_\_\_\_

## **▲CAUTION - IMPORTANT**

Before using the hoist, anyone who will install, operate, or maintain the hoist should read this manual thoroughly. For safe, dependable, and economic performance, follow all the instructions and recommendations contained herein. Do not use this hoist in a manner other than those stated in this manual. It is also important to retain this manual for future use.

## **▲WARNING**

This hoist is intended for industrial use only and should not be used to lift, support or otherwise transport human cargo.

## **1.0 Safe Operating Practice**

The following are recommendations for safe operation of the overhead hoist.

Failure to heed the following recommendations could endanger the operator and others.

Always use good common sense.

Safety is the responsibility of the operator of the equipment.

**You must be competent and attempt to foresee and avoid all hazardous conditions.**

To be as safe as possible, the hoist must be given proper preventive maintenance & periodic inspections as described in this manual and any National Safety Codes for overhead hoists.

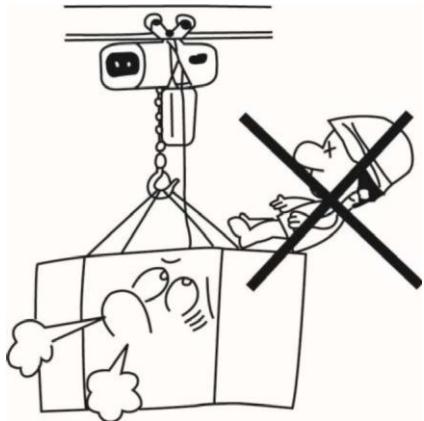
- Do not operate a hoist unless you are properly trained, physically fit, and authorized to do so.
- Do not operate hoist unless you are familiar with all controls, warning, and instructions on or attached to the hoist, safe operating listed in this bulletin, National Safety Codes, and all pertinent federal, state local regulation before starting operation.
- Do not allow any unqualified personnel to operate the hoist.
- Never pick up a load beyond the rated capacity appearing on the hoist.
- Never carry personnel on the hook or the load.
- Never lift a load with the hoist until all personnel are clear.
- Never use the chain as a sling.
- Do operate the hoist apart from the load suspended.
- Do not try to lift fixed or obstructed loads.
- Do not transport load over personnel.
- Do not use the chain as a ground for welding.
- Never touch a welding electrode to the chain.
- Do not leave a load suspended in the air for extended or unattended periods.
- Keep watching the load while operating the hoist.
- Center hoist unit over the load before lifting. Avoid side pull and end pull.
- Be sure the sling is properly seated in the saddle of the hook.
- Make sure a load clears neighboring stockpiles of machinery before moving.
- Avoid plugging, excessive inching, and quick reversals of load.
- Avoid swinging of load or load hook when traveling the hoist.

- Check Limit devices and braking mechanism daily for proper function Check daily the chain for improper seating, twisting, kinking, wear, or other defects before the hoist.
- Be sure that the power supply is disconnected before performing maintenance and repair procedures.
- Do not operate the hoist if it is functioning improperly.
- Do not use the limit switch as a means of stopping the loaded hook in the down direction. This is primarily a backup device.
- Do not use a hoist in the manner not described in this manual.
- Perform all daily, monthly, and yearly inspections as indicated.
- Do not remodel the hoist.
- Do not use hoist in the manner to restrict a free action of lifting, such as material cargo guided by rails for example.
- Do not use the hoist where it is exposed to rain or water.
- Double fall chain does not opposite use

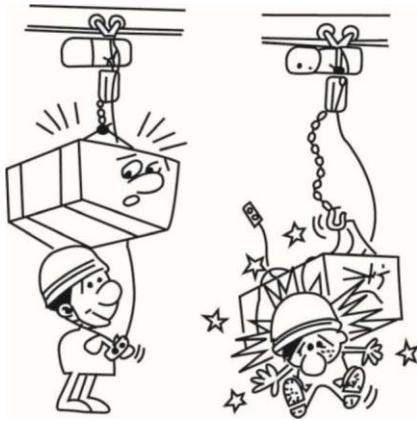
## 1.1 For Your Safety

Please read and follow the instruction manual in detail.

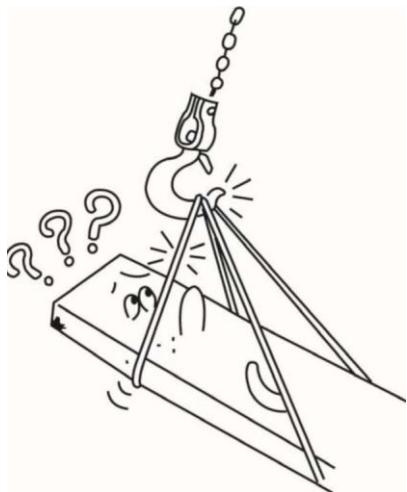
1. Do not lift people and never ride the hoisting load.



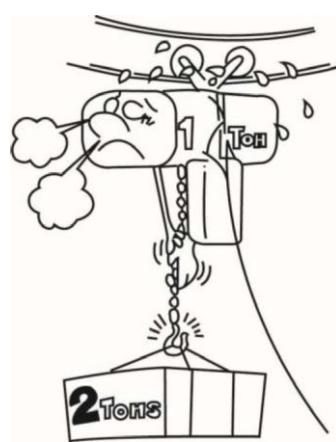
2. Do not lift load over people. Do not be under the hoisting load.



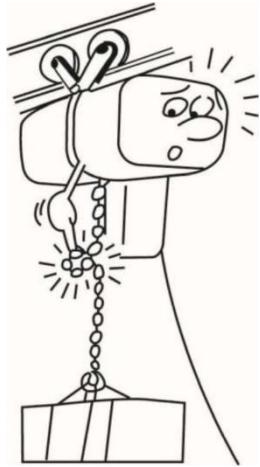
3. Make sure the sling is well balanced. Avoid tip loading and loading on hook latch.



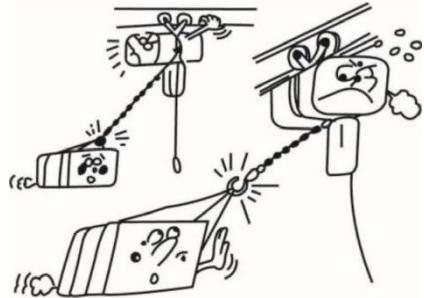
4. Never lift the load over the rated capacity.



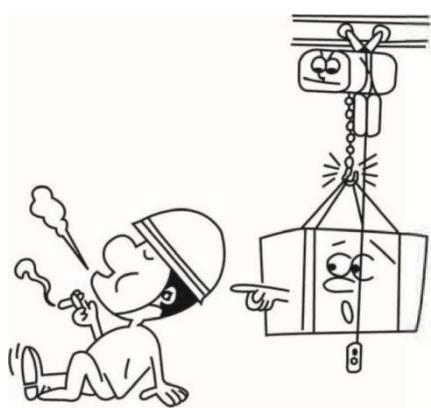
5. Do not operate with kinked, twisted, or damaged chain.



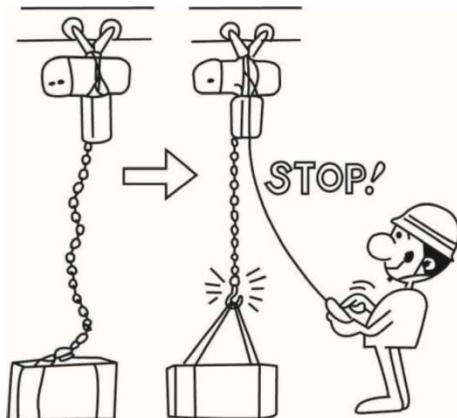
6. Avoid side pull or end pull, and quick reversal operations.



7. Never leave the suspended load unattended.



8. Make sure you take up slack slowly.



## 2.0 General Information

### 2.1 Blitz SBVi1036 Electric Chain Hoist

#### Single Phase / 1-Speed

SKU	Cap	Speed	Lift	Voltage	HP	Amp	Headroom	Net Weight
SBV0536	500 lb.	36 fpm	15 ft	115/1	1.8 HP	15	26 Inch	66 lbs.
SBV1036	1000 lb.	36 fpm	15 ft	115/1	1.8 HP	15	26 Inch	71 lbs.

### 2.2 Application Information

This hoist is intended for general industrial use in the lifting and transporting of freely suspended material loads within its rated capacity.

This hoist is rated as an M5 class hoist.

Load & Use Determines Class	≤ 0.5hr	≤ 1hr	≤ 2hr	≤ 4hr	≤ 8hr	≤ 16hr	> 16 hr
	Load Spectrum (ISO)		/ 10 Year Serviceable Life in hours				
Light Duty			M3	M4	M5	M6	M7
			3200	3200	12500	25000	50000
Medium Duty		M3	M4	M5	M6	M7	
		1600	1600	6300	12500	25000	
Heavy Duty	M3	M4	M5	M6	M7		
	800	800	3200	6300	12500		
Very heavy Duty	M4	M5	M6	M7			
	800	1600	3200	6000			

#### Light Duty

Occasionally full-load  
Usually light-load  
Small type fixed-load

#### Medium Duty

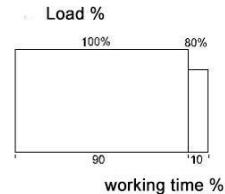
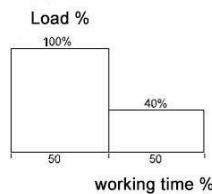
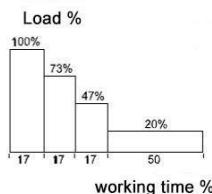
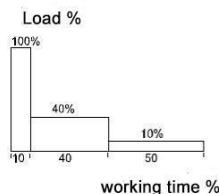
Occasionally full-load  
Usually light-load  
Generally fixed-load

#### Heavy Duty

Repeat full-load  
Usually typical-load  
Heavy duty fixed loading

#### Very Heavy Duty

Nearly always full-load  
Very heavy duty fixed loading



ISO	M3	M4	M5	M6	M7	M8
CMAA	A	B	C	D	E	F
FEM	1Bm	1Am	2m	3m	4m	5m
HMI	H2	H3	H4	H5	H5	H6
GB	A3	A4	A5	A6	A7	A8

Prior to installation and operation, we caution the user to review his application for abnormal environmental or handling conditions and to observe the applicable recommendations as follows:

**▲ CAUTION**

- Do not use the hoist for transporting hot molten masses.
- Do not use the hoist in explosion hazard areas.
- Do not use the hoist aggressive environments and outdoors.
- Do not use the hoist at low temperatures below 32 F or at temperatures above 104 F.

**2.2.1 Adverse Environmental Conditions** Do not use the hoist in areas containing flammable vapors, liquids, gases or any combustible dust or fibers. Do not use this hoist in highly corrosive, abrasive, or wet environments. Do not use this hoist in applications involving extended exposure to ambient temperatures below 32 Deg F or high temperature over 104 Deg F. Do not use a hoist over 3500 ft above sea level. Do not use the hoist in the areas with humidity over 85%.

**2.2.2 Lifting of Hazardous Loads** This hoist is not recommended for use in lifting or transporting hazardous loads or materials which could cause widespread damage if dropped. The lifting of loads which could explode or create chemical or radioactive contamination if dropped, requires fail-safe redundant supporting devices which are not incorporated into this hoist.

**2.2.3 Lifting Of Guided Loads** This hoist is not recommended for use in the lifting of guided loads, including dumbwaiters and non-riding elevators. Such appliances require additional protective devices which are not incorporated into this hoist.

### 2.3 Repair Parts Ordering Information

To provide prompt service, place all parts orders with your Starke components distributor or contact Starke via [Starkeamerica.com](http://Starkeamerica.com). The following information must accompany all correspondence or replacement parts orders.

- Complete data from hoist nameplate. (Model, Serial Number, Volts, Phase)
- Your name, email address, Company name and address for shipping purposes.
- Part Numbers, description, and quantity required.
- Urgency of order.

## 2.4 Function Testing

**2.4.1 Limit Switch Operation.** Before placing a stored hoist in operation check for proper operation of the upper and lower physical limit switch. The hoist should stop immediately once the limits are encountered.

**▲ CAUTION** Do not operate the hoist if the limit switch is not operating properly.

**2.4.2 Rated capacity limiter.** The rated capacity limiter is designed for safe operation of the hoist. It is composed of brake washer, butterfly spring, spring seat, and adjusting nut.

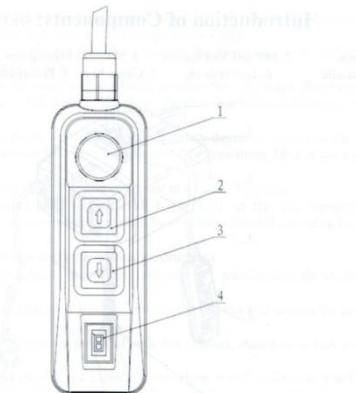
## 3.0 Theory of Operation

### Starke Blitz SBV Hoist – Overview and Operation

The Starke Blitz Variable Speed (SBV) hoist is designed for frequent lifting of light to moderate loads. It features smooth start/stop operation.

By using the pendant buttons (fig 2 & 3) the operator can control vertical movement—raising or lowering the load—while using the other hand to guide or position the object with precision. **Caution:** Always move at a controlled pace to prevent injury. Avoid placing your hand or fingers in pinch points between the load and surrounding objects.

### Operation



To operate the hoist, simply press the up (fig. 2) or down (fig. 3) button on the pendant. This motion will raise or lower the hoist chain accordingly. The more you increase pressure on the button you select the faster the chain speed will be. For slow, precise motions push the button lightly. For high speed, increase pressure on the button until it is fully depressed.

You can change direction at any time, transitioning smoothly between raising and lowering. The hoist motor's smooth action helps reduce swaying or accidental drops, improving both safety and control.

### Safety Features

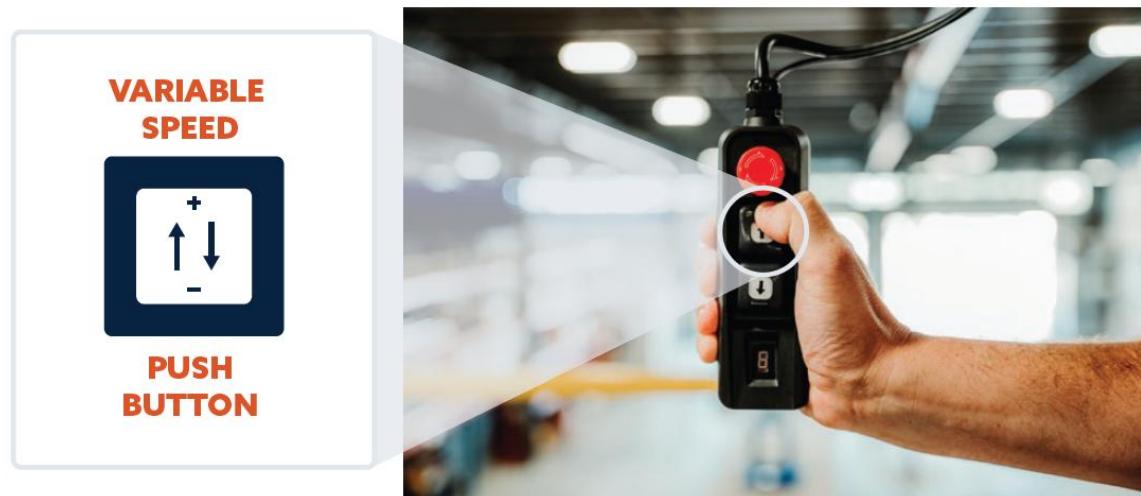
The pendant includes a red safety stop (fig.1) button for emergency shutdown of the hoist. Press the red button to shut the hoist off and stop all motion.

### Pendant display

The control pendant includes a display (fig. 4) located below the up/down button. This display will show normal operation or fault code depending on the current status of the hoist.

### 3.1 Good Operating Practices

- 3.1.1 The operator should not engage in any practice which will divert his attention while engaged in operating the hoist.
- 3.1.2 Before starting the hoist, the operator should be certain that all personnel are clear.
- 3.1.3 Before starting the hoist or if there is an abnormal response check for fault codes on the pendant display.
- 3.1.4 No side pulling of the load is allowed. Make sure the hoist is centered over the load before attempting to lift the load
- 3.1.5 Avoid swinging of load whether hoist is still or in motion. Keep the load under operator control at all times. Never push the load and let travel on its own.
- 3.1.6 Check pendant cord around the chain. Watch for kinking, binding, catching on objects.
- 3.1.7 Do not quickly and repetitively cycle the controls of the hoist up and down. Doing so creates excessive heat quickly in the internal hoist lifting parts.



## 4.0 Hoist Inspection

### 4.1 Inspection Schedule

The periods between inspections will vary due to the wide range of duty cycle and operating conditions. The following inspection periods are based on average duty with single shift operation (20—25% on time and 100—150 times/hour starts) under normal environmental condition. If the hoist is used in heavier applications or under adverse environmental conditions, it should be inspected more frequently.

▲ **CAUTION** Do not operate hoist until all deficiencies are corrected.

### 4.2 Inspection

#### 4.2.1 Daily inspection

Inspect the following items daily before operating the hoist.

- Check pendant handle, brake, and physical limit switches for proper operation.
- Inspect the hook to ensure that no abnormal wear exists on the sling section and the hook is not bent to open excessively. Fig. 3 shows standard dimensions of the hook opening.
- Make sure that the bottom hook swivels freely.
- Check chain links for wear, twist, gouging, burrs, or distortion.
- Check for a damaged or a malfunctioning hook latch.

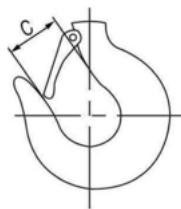


Figure 3:  
Hook Dimensions **C = 7/8"**

▲ **IMPORTANT NOTE:** If a bent or twisted hook is observed, other load bearing components of hoist or trolley shall be inspected, because bent or twisted hooks indicate over loading or abuse of the unit.

▲ **CAUTION** Do not operate the hoist is functioning improperly or damage is noticed.

#### **4.2.2 Monthly inspection** Inspect the following items at 30-day intervals.

- All items under daily inspection.
- Chain: If chain binds, jumps or is noisy, check for cleanliness and proper lubrication, if trouble persists, inspect chain for wear and elongation.
- Hooks: check for cracks or deformations. Replace hook if the mouth opening is more than normal hook opening or twists from normal plane of hook.
- Electric parts: check for signs of any deterioration of controls, physical limit switch, and pendant handle.
- Check for loose bolts, screw, and nuts.

**▲IMPORTANT NOTE:** If you suspect problems with the holding brake, please send unit in to have repairs made. Use the contact form on [starkeameica.com](http://starkeameica.com) to request service assistance.

#### **4.2.3 Annual inspection** Inspect the following items annually.

- Check all items under daily and monthly inspection.
- Check hooks for cracks by means of magnetic particle test or other suitable crack detecting test
- Inspect supporting structure and trolleys (if used) for continued ability to support the imposed loads.
- Check holding brake operation.

**▲IMPORTANT NOTE:** It is recommended that an annual inspection be done by an authorized Starke representative and the records be kept for future use.

Visit [starkeamerica.com](http://starkeamerica.com) for more information.

## 4.3 Preventative Maintenance

**4.3.1 Lubricant** The gear case of this hoist is filled with lifelong maintenance lubricant. During operation of the hoist there may be a small amount of lubricant weeping out, especially during first operation. This is normal and does not require adding more lubricant.

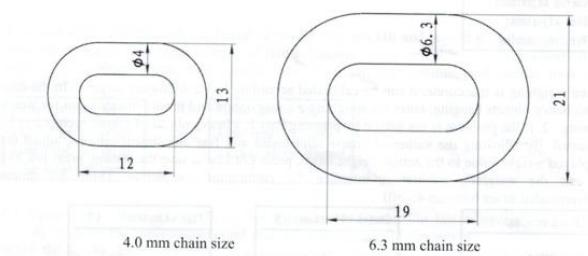
### 4.3.2 Wiring and terminal

- Make sure all connections are tight. Terminals are to be securely crimped to wires and insulation in good condition.
- Replace terminals or wire if necessary.

**4.3.3 Load chain** Carefully inspect the chain for wear between the links in the section of chain that most often passes over the pocket wheel. Check several links, as wear is seldom even from one link to another. The chain should be replaced if wear has increased beyond the specified length limits.



Chain specification is as follows:



**▲IMPORTANT NOTE:** The gauge length should be checked with a load on the hook.

## 4.4 Function Testing

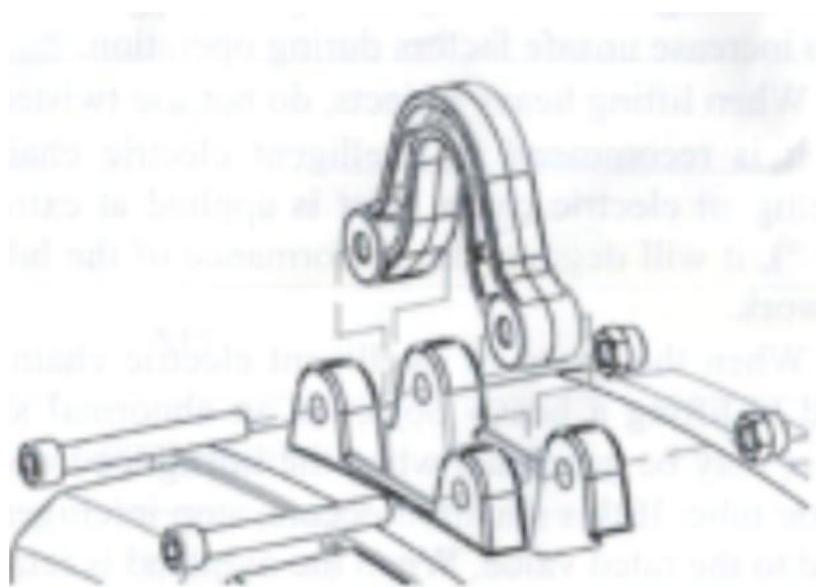
4.4.1 After a repair of the hoist, test with a light load for proper function. Make sure that all device mechanisms operate properly with a light load, then apply 100% rated capacity.

## 5.0 Installation

At this point you should have read the safety information and understood this hoist's operation. You are now ready to hang the hoist on your trolley or supporting structure. It is for your safety that you must proactively inspect the supporting structure that you intend to mount the hoist to BEFORE you apply a load to the hoist.

### 5.1 Upper Hook Point

Remove the 2 bolts at the top of the hoist body as shown and remove the upper mounting bar. Install the bar through your trolley or support structure using the hardware removed.



The power supply for this hoist is 115V single phase. Once you plug in your hoist please use the 4.2.2 section for a pre-use inspection.

## 6.0 Electrical Information

Starke Blitz SBV0536 or SBV1036 Hoist

Power Supply	115V Single Phase
Rated Amps	15
Insulation Class	B
Protection Class	IP54
HP	1.8
ISO	M5
Capacity	500 or 1000 lb.
Chain Diameter	6.3 mm

## 7.0 Troubleshooting

The Blitz SBV Series hoist senses errors and provides information regarding the fault. When the hoist fails to work, an error code may appear on the pendant display. This can guide you as you examine what problems may exist preventing proper operation.

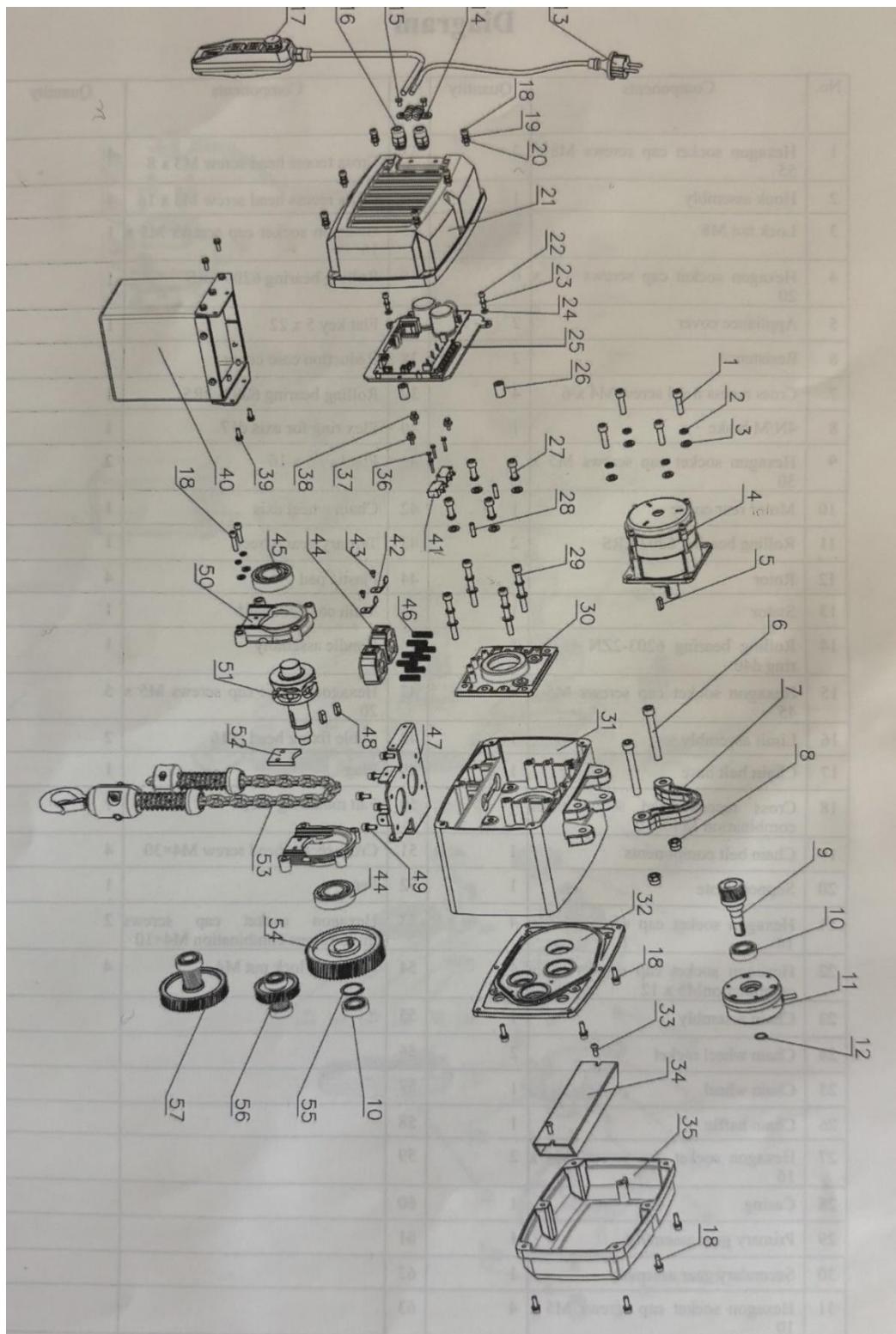
- 0 = Both buttons pressed at same time
- 1 = Maximum power limit reached
- 2 = Abnormal drive voltage received
- 3 = IGBT fault (control board)
- 4 = Locked rotor wheel, check for jam
- 5 = Over current
- 6 = Over pressure limit, Check brake
- 7 = High temperature limit
- 8 = Sampling abnormality- Contact Starke
- 9 = Hall abnormality- Contact Starke

Press emergency stop button to reset codes temporarily to override faults 1 through 6.

If after you have done the basic examination, you need assistance please contact Starke using the contact form available on the Starkeamerica.com website. Let us know if you need technical assistance and we can call the number you provide or email you.

## 8.0 Parts Drawings and Lists

### 8.1 Hoist Assembly Diagram



## 8.2 Hoist Assembly Part List



## Starke Products Warranty

### 1 Year (12 Month) Parts & Labor Warranty

Unless otherwise specified, Starke guarantees that our products are free from material defects in design and workmanship under normal use, proper maintenance, and service.

This warranty is strictly limited to 12 months for single shift operation or 2,000 hours after installation, or 14 months after shipment, whichever is shorter. Within ten days after defect is found, warrantee must deliver a written notice to Starke providing defect information. All requested warranty information must be received promptly by Starke in no more than 5 business days.

**Customer is responsible for all shipping charges on returned/warrantable items. Starke will cover the repair (parts and labor) at no charge or provide a replacement item at Starke's discretion.**

This warranty does not cover defects or damage caused by acts of God, unusual wear and tear, improper use, or improper maintenance by the user. No responsibility for consequential damage is expressed or implied, and the responsibility under this warranty/guaranty is limited to the repair or replacement of the defective materials. Repair or replacement of the item is fully at the discretion of Starke.

**ALL OTHER REPRESENTATIONS, EXPRESS OR IMPLIED, WARRANTY, OR LIABILITY RELATING TO THE CONDITION OR USE OF THE PRODUCT ARE SPECIFICALLY DISAVOWED, AND IN NO EVENT SHALL STARKE BE LIABLE TO BUYER, OR ANY THIRD PARTY, FOR ANY DIRECT OR INDIRECT CONSEQUENTIAL OR INCIDENTAL DAMAGES**

STARKE

[Starkeamerica.com/contact-us/](http://Starkeamerica.com/contact-us/)

## Notes







**Contact Your Starke Representative for More Information on  
Products to Help Maximize Your Workplace Efficiency**



**Hoists & Trolleys**

**Crane Components**



**Electrification**

**Crane Kits**



**Slings**



**Safety**